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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,580	03/16/2004	Paul F. Fewster	5926P010D	3478
7590	11/05/2004		EXAMINER	
Eric S. Hyman Blakely, Sokoloff, Taylor & Zafman, LLP 12400 Wilshire Boulevard, 7th Floor Los Angeles, CA 90025			HO, ALLEN C	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 11/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/802,580	FEWSTER ET AL.	
	Examiner	Art Unit	
	Allen C. Ho	2882	<i>Am</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>032004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **24, 26, 28**. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: **38** (page 8, line 25). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any

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required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. Fig. 2 is objected to because the reference text "2 '" should be replaced by --2ω'--.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:

- (1) There are no section headings in the specification.
- (2) Page 8, line 17, "32" should be replaced by --34--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schuster *et al.* (U. S. Patent No. 6,226,349 B1).

With regard to claim 1, Schuster *et al.* disclosed an x-ray diffractometer, comprising: a sample stage (8) for mounting a sample (9), the sample stage being rotatable about an axis; a double pinhole collimator (14, 15) for directing x-ray radiation to a sample on the sample stage; a detector (29) for detecting x-rays diffracted by the sample; and an analyzer crystal (30, 35) arranged between the sample stage and the detector to direct x-rays diffracted by the sample onto the detector, wherein the analyzer crystal and detector are rotatable (12) about an axis that is coaxial with the axis of rotation of the sample stage.

With regard to claim 2, Schuster *et al.* disclosed an x-ray diffractometer according to claim 1, wherein the size of the pinhole of the double pinhole collimator nearest the sample stage is adjustable to provide an x-ray spot on the sample of variable size (column 8, lines 16-19).

With regard to claims 3 and 4, Schuster *et al.* disclosed an x-ray diffractometer according to claim 1, wherein a slit (31, 33) is arranged between the sample stage and the detector.

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7. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Wölfel *et al.* (U.S. Patent No. 4,364,122).

With regard to claim 1, Wölfel *et al.* disclosed an x-ray diffractometer, comprising: a sample stage (46) for mounting a sample (44), the sample stage being rotatable about an axis (48); a double pinhole collimator (58, 60) for directing x-ray radiation to a sample on the sample stage; a detector (52) for detecting x-rays diffracted by the sample; and an analyzer crystal (70) arranged between the sample stage and the detector to direct x-rays diffracted by the sample onto the detector, wherein the analyzer crystal and detector are rotatable about an axis that is coaxial with the axis of rotation of the sample stage (column 5, lines 34-52).

With regard to claim 2, Wölfel *et al.* disclosed an x-ray diffractometer according to claim 1, wherein the size of the pinhole of the double pinhole collimator nearest the sample stage is adjustable to provide an x-ray spot on the sample of variable size (column 5, lines 14-19).

With regard to claims 3 and 4, Wölfel *et al.* disclosed an x-ray diffractometer according to claim 1, wherein a slit (50) is arranged between the sample stage and the detector.

With regard to claim 5, Wölfel *et al.* disclosed an x-ray diffractometer according to claim 1, further comprising a drive (required when the diffractometer is automated) for rotating the sample stage and the detector and analyzer crystal with a ratio of rotation angles of substantially 1:2 ($\theta:2\theta$).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster *et al.* (U. S. Patent No. 6,226,349 B1) as applied to claim 1 above, and further in view of Fujiwara (U. S. Patent No. 5,878,106).

With regard to claim 5, Schuster *et al.* disclosed an x-ray diffractometer according to claim 1, wherein the sample stage and the detector and analyzer crystal are rotated with a ratio of rotation angles of substantially 1:2 (Fig. 8).

However, Schuster *et al.* did not teach that the x-ray diffractometer further comprises a drive for rotating the sample stage and the detector and analyzer crystal.

Fujiwara disclosed an x-ray diffractometer that comprises a drive (10, 17) for rotating the sample stage (5) and the detector (13) with a ratio of rotation angles of substantially 1:2 (22).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ a drive for rotating the sample stage and the detector and analyzer crystal, since a person would be motivated to automate the process of data acquisition.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

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provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1, 2, and 5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,731,719 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- (1) Kikuchi (U. S. Patent No. 6,385,289 B1) disclosed an x-ray diffraction apparatus for measuring x-ray rocking curves.
- (2) Dube *et al.* (U. S. Patent No. 6,269,144 B1) disclosed an apparatus for diffraction measurement using a scanning x-ray source.
- (3) Yokoyama *et al.* (U. S. Patent No. 6,198,796 B1) disclosed an apparatus for automatically selecting Bragg reflections.
- (4) Touryanski *et al.* (U. S. Patent No. 6,041,098) disclosed an x-ray spectrometer.
- (5) B. D. Cullity. Elements of X-Ray Diffraction, second edition (Reading, MA: Addison-Wesley, 1978), p. 156-158.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The examiner can normally be reached on Monday - Friday from 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached at (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen C. Ho
Patent Examiner
Art Unit 2882

19 October 2004